9
calorics per culm*
are produced, or that
CO are liberated
If now, instead of CO, CO* wore, produced, KOHO <»alorit*s would be liberated by 1 kilograннne C, whilst, rs(') culm* mrire, C02 would be formed.
Therefore, the production of 1 cubic metre (H)3 in a proof
H OHO
that in the reaction chamber, -'%u = i,:ii4 calories urn
I *ou
liberated . . . (20).
From a comparison between these two numbers for CO imtl C02 it results that the temperature of reaction in the procurer in the production of air-gas nuiRt undergo a eoiisidenthln increase if, in addition to CO, C0j» in also ^enerutetl. Kmm the researches of Naurnann & Krnst (ride pp. H:l awl *IK it however follows that the formation of COa at It'tuprmturrM above 1,000° generally in impossible; and as ulivmly in th<< formation of pure CO a toniporaturo of rtmction i>f fjir uhnvu 1,000° is insured, so in cases in which (•().,» npp^urs in nn air-gas must this have had a special CRUMB, Th<* cuuso thiu^'of JH only explainable by free oxygon having nwlinl tin* gun chamber and having burnt CO already formed. If in thu* due to either insufficient thickness of the lied of nirlHtti, t»r there have been faults in the air supply.
In the dissertation on the reactions in the producer, t!ut formation of water has been already referred to. Herein tht* oxygen required to gasify the C is derived from water, which is thereby decomposed into its constituent**. Noxv, wuter consists of H and 0, and by tho union of both in the form of fluid water at 0°, there is developed front 1 kilogramum II, 34,600 calories,1 and 9 kilogrammes water are formwl. . Therefore, on the decomposition of !) kitogrammeH watttr, tin* same amount of energy, i.e. H4,i>00 calorien, itntnt lie a)i»u»rlMtfi.
Now, the water in almost exclusively introduced into tin* producer in the form of steam, and in mo«t proclmutrx thin steam is taken from the main steam pipen of tho work* in which it is under a pressure of some atmospheres titnl po*. sesses an energy content of some 0/>0 calorien per kilogntutmoj
i For these calculations the Bo-called u higher boat